## Fig. 1

THE AMOUNT OF ADDED W (MASS PERCENT)
THE AMOUNT OF PRECIPITATED W (MASS PERCENT)

Fig. 2

Fig. 3

TEMPERATURE (°C)
TIME (SECOND)
FREE THERMAL EXPANSION
STRAIN CONTROL
RESTRAINT RATIO

## Fig. 4

THERMAL FATIGUE LIFE (TIMES)
THE AMOUNT OF PRECIPITATED W (%)
SAMPLE:0.005C-0.07Si-1.02Mn-15.2Cr-1.92Mo-3.02W
-0.51Nb-0.004N STEEL

## Fig. 5

THE AMOUNT OF PRECIPITATED W (%)

HOT-ROLLED-SHEET ANNEALING TEMPERATURE (°C)
TOUGHNESS OF HOT ROLLED AND ANNEALED SHEET
OK:CHARPY ABSORBED ENERGY AT ROOM TEMPERATURE≥15J/cm²
NG:CHARPY ABSORBED ENERGY AT ROOM TEMPERATURE < 15J/cm²

TOUGHNESS OF HOT ROLLED AND ANNEALED SHEET OK: CHARPY ABSORBED ENERGY AT ROOM TEMPERATURE ≥ 15J/cm² NG: CHARPY ABSORBED ENERGY AT ROOM TEMPERATURE < 15J/cm²

Fig. 1

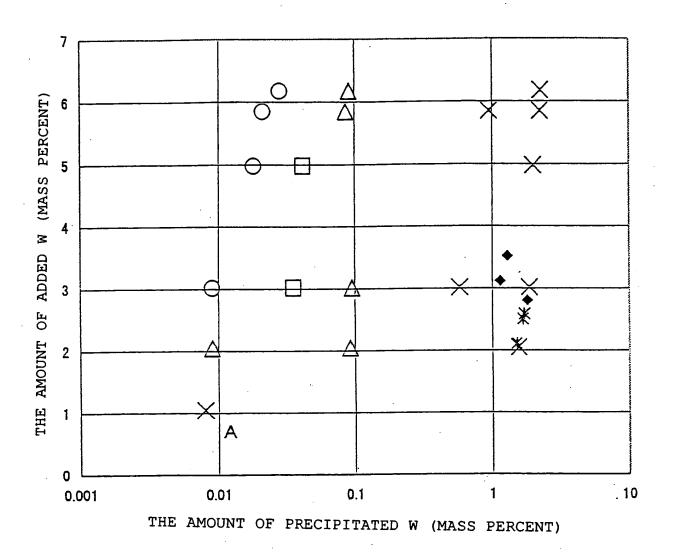


Fig. 2

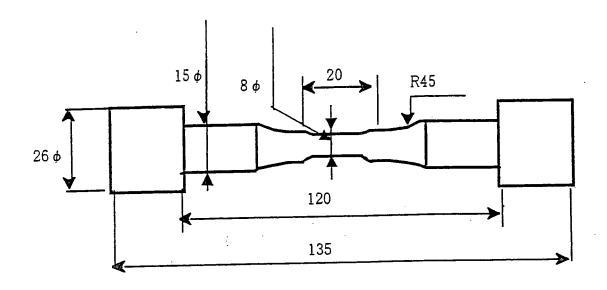


Fig. 3

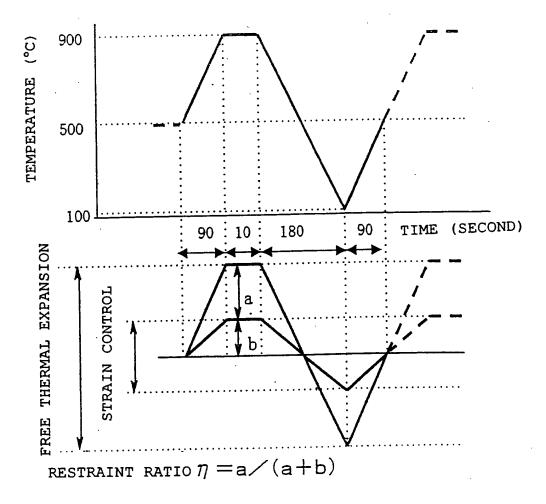


Fig. 4

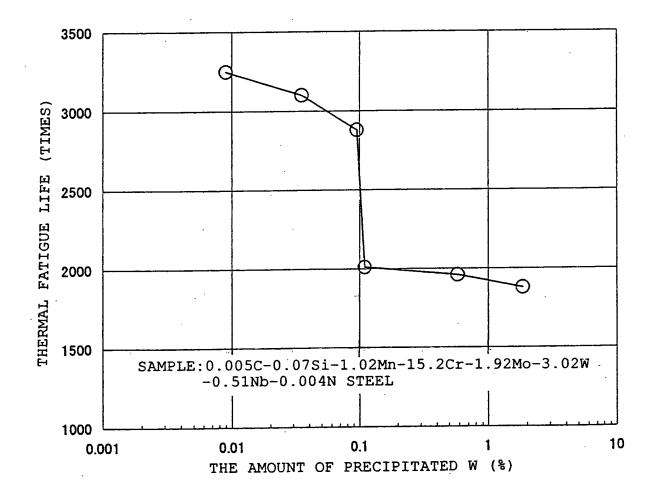


Fig. 5

